1996 ANNUAL UPDATE
ENVIRONMENTAL RESTORATION RANKING

Rocky Mountain Remediation Services, L.L.C.

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The Rocky Flats Cleanup Agreement (RFCA, EPA 1996a), Attachment 4, contains the 1995 prioritized list of Environmental Restoration (ER) sites developed to select the top priority sites for remediation (DOE, 1995a). The list was developed to be used as an aid in planning and prioritizing remedial actions at Rocky Flats Environmental Technology Site (RFETS). The sequence of remediation activities at RFETS has generally followed the prioritization. Other factors that also influence the remediation sequence are funding, project cost, resource availability, data sufficiency, and integration with other remedial and site activities. Prioritization accelerates the cleanup process of the worst sites first, and more quickly reduces risks to human health and the environment. The prioritization of cleanup targets also results in cost reductions by allowing better planning, and more efficient utilization of resources.

The 1995 prioritization methodology was developed by a working group of the United States Environmental Protection Agency (EPA), the Colorado Department of Public Health and the Environment (CDPHE), the Department of Energy (DOE), Kaiser-Hill, and Rocky Mountain Remediation Services (RMRS) staff and was implemented by RMRS. The result was a prioritized list of ER sites, including a list of ranked sites that require more information (DOE, 1995a). In accordance with RFCA Attachment 4, the ranking has been updated for 1996. The evaluation process is essentially the same as was used in the September 1995 ranking, with the following exceptions:

- Action Level Framework (ALF) (RFCA, Attachment 5) values were used instead of Programmatic Risk-Based Preliminary Remediation Goals (PPRGs),
- The scoring scale was adjusted to reflect the greater range in ALF ratios,
- Impact to surface water was evaluated instead of mobility,
- A professional judgment factor was added to account for process knowledge,
- Groundwater plumes were evaluated and ranked separately from the contaminant source,
- Metals data for subsurface soils were not used, as ALF values were not available in time to be included in the evaluation, and
- The secondary evaluation, which included project cost and schedule estimates has been omitted due to other planning activities ongoing at the RFETS.

General Methodology

The ranking process detailed in RFCA Attachment 4 has been slightly modified for 1996 to incorporate the ALF and process knowledge. This ranking was generated by using concentrations of contaminants present at different sites, action levels for the appropriate media and location, and factors for impact to surface water, potential for further release, and

professional judgment to develop a score for each site. The scores were then ranked to determine which sites have the highest priority. This methodology is conservative and is used only to generate a list to prioritize remedial actions, and pre-remediation investigations. It is not meant to replace a formal risk assessment.

The following steps were used in the 1996 ranking process:

- The existing analytical data were compared to background data,
- Data exceeding background were compared to the ALF Tier I and Tier II values,
- Ratios of Tier II ALF values to contaminant concentrations/activities were used for the ranking, unless Tier II values were not available,
- A column was added to the ranking sheet to note Tier I exceedances,
- The resulting ratios were converted to a score of 1 to 10,
- The impact to surface water was evaluated, and assigned a factor of 1 to 3
- The potential for further release was evaluated, and a factor of 1 to 3 applied,
- Process knowledge of the site was evaluated, and a professional judgment factor of 0.5 to 2 applied, and,
- The results of the previous steps were multiplied to generate a score per site. This score was used to rank the ER sites.

Analytical data in RFEDS from 1990 to the present were evaluated for three media; surface soils, subsurface soils, and groundwater. The analytical data were extracted from RFEDS and compiled into data sets by media and analytical suite. The media-specific analytical data were compared to the media- and chemical-specific background $UTL_{99/99}$. All data above the background $UTL_{99/99}$ were then compared to the appropriate Tier I and Tier II ALF values in RFCA. The draft radiological ALFs (DOE, 1996b) for surface soils were applied to both surface and subsurface soils. The ALF values for metals in subsurface soils were not agreed upon in time to be included in the 1996 ranking and metals data from subsurface soils were not used in the ranking. A review of the data suggests that this will not effect the ranking significantly.

All exceedances of the Tier I and II ALF values were tabulated for groundwater, subsurface soils, and surface soils at each sample location. The locations were plotted on maps using available survey information. Where no survey data is available, approximate locations were derived from work plan maps. The sample locations were assigned to areas-of-concern, IHSSs, and groundwater plumes based on the media, location of the exceedance, and the analyte.

Media Specific Evaluations

Groundwater - Sitewide groundwater data were compared to background $UTL_{99/99}$ values presented in the 1993 Background Geochemical Characterization Report (DOE 1993). Groundwater data were then compared to the Tier I and Tier II ALF values. All well locations

where a chemical concentration exceeds a Tier I or Tier II ALF value were plotted. The locations were then associated with the most probable source area and known groundwater plumes. Ratios of analyte concentrations to the Tier II ALF values were used in the scoring.

Subsurface Soil - All available subsurface soil data collected since 1990 were compared to subsurface soil background $UTL_{99/99}$ values (DOE 1993). The data for volatile organic compounds were compared to the Tier I ALF values (there are no Tier II values), the radiological activities were compared to the surface soil Tier I and Tier II ALF values. The ALF values for metals in subsurface soils were not agreed upon in time to be included in the 1996 ranking. The locations of all borings, where a chemical concentration exceeded an ALF value, were plotted and associated with the most likely source area.

Surface Soil - All available surface soil data for metals and radiologicals were compared to $UTL_{99/99}$ background values computed from data presented in the Background Soil Characterization Program (DOE 1995b). The inorganic and radiological results above background and all data for organic compounds were compared to the Tier I and Tier II ALF values for surface soil. Within the boundaries of the Industrial Area Operable Unit (OU), the surface soil data were compared to office worker ALFs. In the Buffer Zone OU, the surface soil data were compared to open-space ALFs. The ALF exceedances were plotted to determine the most likely source area, IHSS or group of IHSSs, using the most common wind patterns. Ratios of analyte concentrations to the Tier II ALF values were used in the scoring.

Chemical Score Tabulation

All ALF exceedances were tabulated by IHSS, group of IHSSs, or source area. The chemical score was calculated for each media, within each site, by adding the maximum ratio for each analyte per media. The groundwater, subsurface soil, and surface soil scores were then summed to generate a total score per site. This is a conservative approach that allows the sites to be judged on a uniform basis.

A separate score was derived for each groundwater plume by evaluating only the groundwater exceedances. A risk score was calculated for each plume, as above, by adding the maximum ALF ratios for groundwater contaminants associated with all sites within the estimated plume area. This method results in groundwater being used twice; once in the scoring of sources, and again for the scoring of groundwater plumes.

The total chemical scores were graded using the following table so that the risk component of the ranking system would be weighted similarly to the other components. The table has been adjusted from the 1995 methodology due to the increase in the range of the scores.

Total Chemical Score	ALF/PPRG Score
>20001	10
10001-20000	9
5001-10000	8
1001-5000	7
501-1000	6
251-500	5
126-250	4
75-125	3
26-75	2
1-25	1

Surface Water Impacts

The impact of contamination at a site on surface water quality was evaluated and each site was assigned a factor of 1 to 3 to indicate the impact on surface water from each site. The impact to surface water factors were assigned on a scale of 1 to 3 as follows:

1 Contaminants that are immobile in the environment or for which there is no pathway to surface water. Radionuclides and metals were given a score of one unless adjacent to surface water, or on a steep slope bordering surface water. A factor of one was used where engineered structures are in place that prevent the spread of contaminants.

2 This rating was applied where contaminants have or are expected to have an impact on surface water at the Tier II ALF level (MCL).

3 This rating will apply where there is a documented or probable impact to surface water above the Tier I ALFs (100 x MCL).

Potential for Further Release

This factor takes into account the potential for additional release of contaminants into the environment and includes cross-media movement of contaminants within the environment. Sites were assigned a value of 1 to 3 based on the following criteria:

1 Sites where contaminants are not present as free product, nor in very high concentrations, and/or show no cross contamination of environmental media. A factor of one was used where engineered structures are in place that effectively prevent the release or migration of contaminants.

2 Sites where high concentrations in soil may be present and/or where there is a potential for cross media movement of contamination.

3 Sites where there is suspected or known free product, significant levels of contamination exists, and/or where cross contamination of environmental media is present or likely.

Professional Judgment

A professional judgment factor was added to this year's ranking based on process knowledge not represented by the other factors. The reasons for assigning the professional judgment factor are given in the comment column of the ranking. The values for this factor are:

0.5 The ranking overestimates the priority of a site. This was used if a risk assessment or conservative screen has been completed indicating an acceptable risk, but the site ranks high on the priority listing.

1 The ranking reflects process knowledge of a site.

2 The ranking underestimates the priority of a site . This may be due to a lack of data, coupled with process knowledge of significant releases.

Total Score and Ranking

The total score was calculated by multiplying the ALF score times the impact to surface water, potential for further release, and professional judgment factors. A formal risk assessment is a more precise evaluation of the same data, and, where risk assessment data exist, it was used to refine the ranking of the sites through the use of the professional judgment factor.

Where insufficient data currently exist to rank sites, these sites were assigned to the category of needs further investigation (INV) and ranked using the professional judgment factor. This placed them on the ranking above known low-risk sites. As data become available, the ranking for these sites will be updated.

The Solar Ponds groundwater score was calculated without using data from an upgradient well which shows the effects of an upgradient plume. This well was used in the calculations for the groundwater score for IHSS 118.1 and the carbon tetrachloride spill plume.

Where analytical data and process knowledge indicate that there are localized areas of contamination, the associated data was eliminated from site evaluation, and was assigned to a hot spot list. These sites will be evaluated to verify that these are hot spots. Most of the localized extent sites are PCB sites, including a PCB site in IHSS 150.6 and those surrounding Bowman's

Pond. The Old Landfill has analytical data indicating the presence of small radiological anomalies at the surface. Best management practices will be used on these hot spots as part of the final remedy for the Old Landfill.

Radium 226 and 228 data were not evaluated for the following reasons:

- Radium 226 and 228 are not listed as having be used at RFETS in either the Historical Release Report (DOE, 1992) or the Rocky Flats Toxicologic Review and Dose Reconstruction, Task 3/4 Report (ChemRisk, 1992).
- The decay chains and half-lives of decay products make it highly unlikely that significant amounts of radium 226 or 228 would have accumulated by radioactive decay of radionuclides known to have been used at RFETS.
- The soils and groundwater in the foothills to the west of RFETS are known to have high levels of both uranium (total) and radium 226.
- The background amount for radium 226 in surface soil has a PPRG ratio of 48. Therefore, any surface soil analytical result above background would skew the prioritization score to a higher result. This is not justified given the information on usage and natural occurrence.

Results

The use of the groundwater ALF values in the 1996 ranking and the inclusion of the groundwater plumes increased the influence of groundwater on the final priority listing. This lowered the tank sites on the priority list, although they remain among the top ranked sites. Some sites also moved on the basis of newly available data. Overall, highest priority sites were reshuffled but remained near the top of the listing.

Remediation of sources of contamination in 7 of the 15 top ranked IHSSs has been completed or interim action and stabilization has been completed during FY96 (Table 1). The top three ranked IHSSs, 109 (Ryan's Pit), IHSS 110 (Trench T-3), 111.1 (Trench T-4) have been completed. The 4 other sites in the top 15 that have been stabilized and interim actions completed are tank T-40, tanks T-2/T-3, tank T-14, and Tank T-16N in IHSS 121. These tanks were cleaned and foamed, but remain in the ground.

Trench T-1 (IHSS 108) was scored using data reported in the Historical Release Report (DOE 1992) from a drum that was uncovered and sampled in a 1982 event. This decision was made based on process knowledge and the conclusion that direct sampling of the trench will be very hazardous. With the inclusion of this data, IHSS 108 ranks number 5 on the listing.

One groundwater plume ranked in the top 10. The Mound Plume, which is located just east of the PA and is migrating toward South Walnut Creek. The 903 Pad & Ryan's Pit Plume, which is migrating southeastward from the 903 Pad and Ryan's Pit toward Woman Creek ranked number 12. There are 6 plumes ranked in the top 20 of the priority listing.

References

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ER Ranking

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Status	Rank	IHSS Number and Name	Total Tank Contents	Total Ground Water	Total Subsurface Soil	Total Surface Soil	Total Chemical Score	ALF Score	SW Impact Score Multiplier	Potential for Further Release Multiplier	Professional Judgment Multiplier	Total Priority Score	Exceeds Tier 1	General Comments
C-96	1	109 Ryan's Pit		33679	2	<1	33681	10	2	3	1	60	yes	Source removed
C-96	2	110 Trench T-3		26101	1612	<1	27713	10	2	3	1	60	yes	Source removed
C-96	3	111.1 Trench T-4		26101	78	n	26179	10	2	3	1	60	yes	Source removed
	4	113 Mound		19064	6	1	19071	9	3	2	1	54	yes	Source of Mound Plume
	5	108 Trench T-1		11	11080	<1	11207	9	1	3	2	54	yes	Trench contents not sampled, subsurface ALF ratio based on previously excavated drum data.
	6	112 /155/183/140 903 Pad and Lip Area		40488	<1	45	40533	10	2	2	1	40	yes	IHSSs evaluated together
	7	Mound Plume		19067			19067	9	3	1	1	27	yes	Impacting surface water in the S. Walnut Creek Drainage
	8	118.1, 132 and 121 Tanks 9 & 10	1194	5756	2321	2	9273	8	1	3	1	24	yes	IHSSs evaluated together-Carbon Tetrachloride Plume Source
IAC-96	9	121 Tank T-40	3570	n	n	<1	3570	7	1	3	1	21	yes	Source removed, tank foamed and stabilized
IAC-96	10	121/124.1/124.2/125 PW Tank T-16N	1453	<1	<1	n	1453	7	1	3	1	21	yes	Source removed, tank foamed and stabilized
IAC-96	11	121 Tanks T-2/T-3, 122-Underground ConcreteTanks	751	270	<1	29	1050	7	1	3	1	21	yes	Tank foamed and stabilized, PAHs in surface soil and groundwater
	12	903 Pad & Ryan's Pit Plume		72427			72427	10	2	1	1	20	yes	Low level impact on surface water in the Woman Creek drainage
	13	East Trenches Plume		26105			26093	10	2	1	1	20	yes	Low level impact on surface water in the S. Walnut Creek drainage
IAC-96	14	121/124.3 Process Waste Tank T-14	1000	<1	<1	n	1000	6	1	3	1	18	yes	Source removed, tank foamed and stabilized
	15	170, 174.1 (174a), 174.2 (174b) PU&D Storage Areas		190	n	12	202	4	2	1	2	16	no	Plume indicates source present
	16	PU&D Yard Plume		190			190	4	2	1	1	8	no	Source not characterized
	17	119.1 - OU 1- Solvent Spill Site		9167	29	159	9355	8	1	1	1	8	yes	Uses current extraction well data only
	18	881 Hillside/119.1 Plume		9167	n	n	9167	8	1	1	1	8	yes	No impact on surface water in the Woman Creek drainage
	19	Carbon Tetrachloride Plume (118.1)		5756	n	n	5756	8	1	1	1	8	yes	IHSS 118.1 is suspected source
	20	121 Tank T-29 (Tank 207)	15	<1	<1	4110	4125	7	1	2	0.5	7	yes	New 1995 data-PAHs in surface soil
	21	Industrial Area Plume		2615	n	n	2643	7	1	1	1	7	yes	No impact on surface water
	22	101 Solar Ponds		2403	<1	14	2417	7	2	1	0.5	7	yes	HHRA 10-4 to 10-6 or less, upgradient groundwater from 118.1 not used in ranking IHSS 101
	23	Solar Ponds Plume		2403			2403	7	2	1	0.5	7	yes	Plume due to NO_3, impacts surface water in N. Walnut Creek drainage
	24	160 Rad Site Bldg 664 Parking Lot		578	n	1	579	6	1	1	1	6	yes	Paved
	25	114-Present Landfill (includes IHSS 203)		415	<1	31	446	5	2	1	0.5	5	no	Compliance, presumptive remedy for closure
	26	Present Landfill Area Plume		415			415	5	2	1	0.5	5	no	HHRA, 10E-4 to 10-6 Remedial Action required due to physical hazard
	27	158 Rad Site - B551/B554		418	n	1	419	5	1	1	1	5	no	Paved
	28	Building 881 Area Plume		257			263	5	1	1	1	5	no	Source may be due to UBC at B881
IAC-96	29	129 - Tank T-4, outside steam plant	<1	n	n	2	2	1	1	3	1	3	no	Tank foamed and stabilized, tank not breached
	30	121, 126.1, 126.2 Tank T-8	<1	n	<1	<1	0	1	1	3	1	3		
	31	Old Landfill Area Plume		174			174	4	1	1	0.5	2	no	HHRA, 10E-4 to 10-6 Remedial Action required due to physical hazard
	32	Building 779 UBC		n	n	64	64	2	1	1	1	2	no	Contamination due to B779
	33	121 Tank T-27		n	n	59	59	2	1	1	1	2	no	PAHs in surface soil
	34	143 771 Outfall		46	<1	3	49	2	1	1	1	2	no	
	35	172 Central Avenue Waste Spill		28	n	18	46	2	1	1	1	2	no	Metals in GW
	36	176 S&W Yard		n	n	26	26	2	1	1	1	2	no	
	37	131 Rad Site #1 - 700 Area		n	n	4	4	1	1	2	1	2	no	
	38	120.1 North Fiberglassing area		n	n	20	20	1	1	1	1	1	no	Contamination probably from 400 Complex
	39	150.3 Rad Site Between B771 & B774		n	n	16	16	1	1	1	1	1	no	

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n = data not available

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	40	214 750-Pad pondcrete/saltcrete storage		n	n	13	13	1	1	1	1	1	no	
	41	157.1 Rad Site North-Central Ave Ditch		5	n	5	10	1	1	1	1	1	no	
	42	157.2 Rad Site south		2	n	5	7	1	1	1	1	1	no	
	43	120.2 West Fiberglassing Area		n	n	6	6	1	1	1	1	1	no	PCB hit above AL, listed under PCB 9.
	44	144 Sewer line overflow		n	n	4	4	1	1	1	1	1	no	
	45	136.2 Cooling Tower Pond East of B444		n	n	4	4	1	1	1	1	1	no	
	46	163.1 Rad Site 700 North B774		n	n	2	2	1	1	1	1	1	no	
	47	139.1 KOH, NaOH condensate tanks spill		n	n	19	19	1	1	1	0.5	0.5	no	PAHs in surface soil
	48	139.2 Hydrofluoric Acid Tank spills		n	n	19	19	1	1	1	0.5	0.5	no	PAHs in surface soil
	49	153 Oil Burn Pit		<1	<1	n	<1	0	1	1	1	0		Remediate with Mound Site, in PA fence
	50	164.3 Rad Site #2 800 Area, 887 Pad		n	n	<1	<1	0	1	1	1	0		
	51	127 Low level Rad waste leak		n	n	<1	<1	0	1	1	1	0		
	52	186 Valve Vault 11, 12 and 13		n	n	<1	<1	0	1	1	1	0		
	53	150.4 Rad Site NW of B750		n	n	<1	<1	0	1	1	1	0		
	54	159 Rad Site B559		<1	<1	n	<1	0	1	1	1	0		
	55	111.3 SE Trenches T-6		n	<1	<1	<1	0	1	1	1	0		
	56	111.4 SE Trenches T-7		<1	<1	<1	<1	0	1	1	1	0		
	57	111.5 SE Trenches T-8		<1	<1	<1	<1	0	1	1	1	0		
	58	111.6 SE Trenches T-9		<1	<1	<1	<1	0	1	1	1	0		
	59	138 Bldg 779 Cooling Tower Blowdown		n	n	<1	<1	0	1	1	1	0		
	60	164.2 Rad Site #2, 800 Area, Bldg 886 Spill		<1	<1	<1	<1	0	1	1	1	0		
	61	111.7 SE Trenches T-10		n	[redacted]	[redacted]	<1	0	1	1	1	0		
	62	137 Bldg 712/713 Cooling Tower Blowdown		n	n	n	0	0	1	1	1	0		Investigation done, analysis not
	INV	171 Fire Training		134	n	<1	134	4	1	2	2	16	no	Empirical data indicates free product present
	INV	Building 444 UBC		156	n	<1	156	4	1	1	2	8		Known contaminant plume
	INV	Building 707 UBC		142	n	<1	12	4	1	1	2	8		Many known spills
	INV	121 Old Process Waste Lines-includes:		1013	n	n	1013	7	1	1	2	14	yes	IHSS 121 includes the following italicized IHSSs
		66 segments (35,000') & 22 tank units-not investigated												Not characterized, probably highly contaminated
		123.2 Valve Vault w. of 707												Not characterized, probably highly contaminated
		147.1 MAAS Area												Not characterized, probably highly contaminated
		149.1 OPWL to SEPS												Not characterized, probably highly contaminated
		149.2 OPWL to SEPS												Not characterized, probably highly contaminated
		215 Abandoned sump in 774												Not characterized, probably highly contaminated
	INV	Bldg 774 UBC (146.1, 146.2, 146.3, 146.4, 146.5, 146.6)		n	n	n	0	0	1	1	2	0		Tanks removed, 1971 rad. data exceeded Tier I levels
	INV	Bowman's Pond (PAC 700-1108)		n	n	n	0	0	2	1	2	0		Process knowledge of probable influent liquids
	INV	150.1 Rad Site N. of 771		n	n	<1	0	0	1	1	1	0		Paved, old data exists
	INV	150.2 Rad Site W. of 771/776		n	n	<1	0	0	1	1	1	0		Paved, old data exists
	INV	117.1 (North Site)&197/Scrap Metal Storage		n	n	<1	0	0	1	1	2	0		Suspected source-known buried material-PU&D yard
	INV	161 - W. of 664		n	n	<1	0	0	1	1	2	0		Waste staging area-lack of data
	INV	117.2 Middle Site Chemical Storage		651	n	<1	651	6	1	1	1	6	yes	*Source*
	INV	128 Oil Burn Pit #1		<1	n	<1	0	0	1	1	1	0		Tied to Building 335 D&D Project
	INV	123.1 Valve Vault #7		n	n	<1	0	0	1	1	1	0		
	INV	135 Bldg 337 Cooling Tower		n	n	<1	0	0	1	1	1	0		

n = data not available

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	INV	150.7 Rad Site S. of 778		n	n	<1	0	0	1	1	1	0		Rad Screens only
	INV	151 Fuel Oil Leak		n	n	<1	0	0	1	1	1	0		
	INV	163.2 Americium Slab		n	n	<1	0	0	1	1	1	0		HPGe Survey
	INV	210 Bldg 980 Cargo Container		n	n	<1	0	0	1	1	1	0		
	INV	213 904 Pad; Pondcrete Storage		n	n	n	0	0	1	1	1	0		Active Storage Unit, not sampled
	INV	116.1 Bldg 447, W. Loading Dock		n	n	<1	0	0	1	1	1	0		
	INV	116.2 Bldg 444, S. Loading Dock		n	n	<1	0	0	1	1	1	0		
	INV	136.1 Cooling Tower Pond W. of 444		n	n	<1	0	0	1	1	1	0		
	INV	148 Waste Leaks		n	n	<1	0	0	1	1	1	0		
	INV	150.8 Rad Site S. of 779		n	n	<1	0	0	1	1	1	0		
	INV	164.1 Rad Site #2 - 800 Area		2	n	<1	2	1	1	1	0.5	0		Spills cleaned up at time
	INV	173 Rad Site Bldg 991		n	n	<1	0	0	1	1	0.5	0.5	no	Spills cleaned up at time
	INV	184 Rad Site 991 Steam		n	n	<1	0	0	1	1	0.5	0		Spills cleaned up at time
	INV	162 - 700 Area		n	n	<1	0	0	1	1	0.5	0		Unconfirmed-no location found
											0.5	0		Spills cleaned up at time
	LOW	Building 881 UBC		257	7	n	264	5	1	1	1	5	yes	No pathway known
	LOW	111.8 Trench T-11		96	<1	<1	96	3	1	1	1	3	no	Organics in groundwater
	LOW	190 Caustic Leak		12	n	<1	12	3	1	1	1	3	no	Evaluate using approved NA/NFA process
	LOW	177-OU 10		<1	n	2	2	1	1	1	1	1	no	PCB hit above AL
	LOW	118.2 Solvent Spills North End of Bldg. 707		<1	n	<1	0	0	1	1	1	0	no	Evaluate using approved NA/NFA process
	LOW	188 Acid Leak Southeast of Bldg. 374		n	n	<1	0	0	1	1	1	0		Evaluate using approved NA/NFA process
	LOW	121-PO8 OPWL Pipeline; 135 ft; Bldg. 881		n	n	n	0	0	1	1	1	0		Evaluate using approved NA/NFA process
	LOW	121-P57 OPWL Pipeline; 112 ft; Bldg. 122		n	n	n	0	0	1	1	1	0		Evaluate using approved NA/NFA process
	LOW	121-T12 Invalid tank location		n	n	n	0	0	1	1	1	0		Evaluate using approved NA/NFA process
	LOW	121-T31 Invalid tank location		n	n	n	0	0	1	1	1	0		Evaluate using approved NA/NFA process
	LOW	121-T33 Invalid tank location		n	n	n	0	0	1	1	1	0		Evaluate using approved NA/NFA process
	LOW	121-T34 Invalid tank location		n	n	n	0	0	1	1	1	0		Evaluate using approved NA/NFA process
	LOW	121-T35 Invalid tank location		n	n	n	0	0	1	1	1	0		Evaluate using approved NA/NFA process
	LOW	175 S&W B.980 Container Storage Facility		n	n	<1	0	0	1	1	1	0		Evaluate using approved NA/NFA process
	LOW	181 Building 334 Cargo Container Area		n	n	<1	0	0	1	1	1	0		Evaluate using approved NA/NFA process
	LOW	182 444/453 Drum Storage Area		n	n	n	0	0	1	1	1	0		Evaluate using approved NA/NFA process
	LOW	205 Sump #3 Acid Site, SE B460		n	n	<1	0	0	1	1	1	0	no	Evaluate using approved NA/NFA process
	LOW	206 Inactive D-386 HW Tank B374		n	n	<1	0	0	1	1	1	0		Evaluate using approved NA/NFA process
	LOW	207 Inactive B444 Acid Dumpsters		n	n	<1	0	0	1	1	1	0		Evaluate using approved NA/NFA process
	LOW	208 Inactive 444/447 Waste Storage.		n	n	<1	0	0	1	1	1	0		Evaluate using approved NA/NFA process
	LOW	147.2 Bldg 881 Conversion Activity		n	n	<1	0	0	1	1	1	0		Evaluate using approved NA/NFA process
	LOW	187 Sulfuric Acid Spill; B443		n	n	n	0	0	1	1	1	0		Evaluate using approved NA/NFA process
	LOW	117.3 S Chemical Storage Site		n	n	<1	0	0	1	1	1	0		Evaluate using approved NA/NFA process
	LOW	169 Hydrogen Peroxide Spill		n	n	n	0	0	1	1	1	0		Evaluate using approved NA/NFA process
	LOW	191 Hydrogen Peroxide Leak		n	n	n	0	0	1	1	1	0		Evaluate using approved NA/NFA process
	LOW	134(N) Lithium Metal Destruction Site		<1	<1	<1	0	0	1	1	1	0		Evaluate by NA/NFA process/tie B335 D&D
	LOW	134(S) Lithium Metal Destruction Site		n	n	<1	0	0	1	1	1	0		Evaluate by NA/NFA process/tie B335 D&D
	LOW	156.1 Radioactive Site		n	n	<1	0	0	1	1	1	0		Evaluate using approved NA/NFA process

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n = data not available

ER Ranking

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Status	Rank	IHSS Number and Name	Total Tank Contents	Total Ground Water	Total Subsurface Soil	Total Surface Soil	Total Chemical Score	ALF Score	SW Impact Score Multiplier	Potential for Further Release Multiplier	Professional Judgment Multiplier	Total Priority Score	Exceeds Tier 1	General Comments
	LOW	150.6 Loading Dock		n	n	<1	0	0	1	1	1	0		Evaluate with NA/NFA/PCB Hot Spot only
	LOW	216.2 East Spray Field - OU 2		n*	n	<1	0	0	1	1	1	0		PPRG ratio less than 1, *2 downgradient wells
	LOW	216.3 East Spray Field - OU 2		n*	n	<1	0	0	1	1	1	0		PPRG ratio less than 1, *2 downgradient wells
	LOW	154 Pallet Burn Site		n	n	<1	0	0	1	1	0.5	0		Removed during PA construction, verify only
	LOW	111.2 Trench T-5		<1	<1	1	1	1	1	1	0.5	0.5	no	
	LOW	192 Pipeline		3	n	n	3	1	1	1	0.5	0.5	no	NFA-Caustic Spill
	LOW	104 Liquid Dumping		<1	10	<1	10	4	2	1	0.5	4	yes	HHRA, less than 10-6
	LOW	115 Original Landfill		172	<1	27	199	4	1	1	0.5	2	no	HHRA, 10E-4 to 10-6
C-96	LOW	130 800 Area Rad Site #1		<1	34	<1	34	2	2	1	0.5	2	yes	HHRA, less than 10-6
	LOW	168 West Spray Field		190	<1	<1	190	4	1	1	0.5	2	no	Passed CDPHE screen-CAD/ROD complete
	LOW	133.4 Ash Pit #4		44	<1	2	46	2	1	1	0.5	1	no	HHRA, 10E-4 to 10-6
	LOW	196 in Old Landfill		44	<1	<1	44	2	1	1	0.5	1	no	HHRA, 10E-4 to 10-6
	LOW	133.1 Ash Pit #1		44	2	<1	46	2	1	1	0.5	1	no	HHRA, 10E-4 to 10-6
	LOW	133.2 Ash Pit #2		44	2	<1	46	2	1	1	0.5	1	no	HHRA, 10E-4 to 10-6
	LOW	133.3 Ash Pit #3		44	<1	<1	44	2	1	1	0.5	1	no	HHRA, 10E-4 to 10-6
	LOW	119.2 Solvent Spill Site		9	<1	<1	9	1	2	1	0.5	1	no	HHRA, less than 10-6
	LOW	133.5 Incinerator		n	<1	<1	0	0	1	1	0.5	0		HHRA, 10E-4 to 10-6
	LOW	133.6 Concrete Wash Pad		n	<1	<1	0	0	1	1	0.5	0		HHRA, 10E-4 to 10-6
	LOW	142.1 Pond A-1		n	<1	<1	0	0	1	1	0.5	0		HHRA, 10E-4 to 10-6 w/pond data
	LOW	142.2 Pond A-2		n	<1	<1	0	0	1	1	0.5	0		HHRA, 10E-4 to 10-6 w/pond data
	LOW	142.3 Pond A-3		n	<1	<1	0	0	1	1	0.5	0		HHRA, 10E-4 to 10-6 w/pond data
	LOW	142.5 Pond B-1		n	<1	<1	0	0	1	1	0.5	0		HHRA, 10E-4 to 10-6 w/pond & sediment data
	LOW	142.6 Pond B-2		n	<1	<1	0	0	1	1	0.5	0		HHRA, 10E-4 to 10-6 w/pond & sediment data
	LOW	142.7 Pond B-3		n	<1	<1	0	0	1	1	0.5	0		HHRA, 10E-4 to 10-6 w/pond & sediment data
	LOW	142.8 Pond B-4		n	<1	<1	0	0	1	1	0.5	0		HHRA, 10E-4 to 10-6 w/pond & sediment data
	LOW	199 Offsite Land Surface		n	<1	<1	0	0	1	1	0.5	0		HHRA, 10E-4 to 10-6 No groundwater issues
	LOW	200 Great Western Reservoir		<1	<1	<1	0	0	1	1	0.5	0		HHRA, 10E-4 to 10-6, plus sediment samples
	LOW	167.2 Landfill Pond Spray Area		n	<1	<1	0	0	1	1	0.5	0		HHRA, 10E-4 to 10-6
	LOW	167.3 Landfill South Spray Area		n	n	<1	0	0	1	1	0.5	0		Focused HHRA, 10E-4 to 10-6
	LOW	102 Oil Sludge Pit		<1	<1	<1	<1	0	2	1	0.5	0		HHRA, less than 10-6
	LOW	103 Chemical Burial		<1	<1	<1	<1	0	2	1	0.5	0		HHRA, less than 10-6
	LOW	105.1 W Out-of-Service Fuel Tank		<1	<1	<1	0	0	2	1	0.5	0		HHRA, less than 10-6
	LOW	105.2 E Out-of-Service Fuel Tank		<1	<1	<1	0	0	2	1	0.5	0		HHRA, less than 10-6
	LOW	106 Outfall		<1	<1	<1	0	0	2	1	0.5	0		HHRA, less than 10-6
	LOW	107 Hillside Oil Leak		<1	<1	<1	0	0	2	1	0.5	0		HHRA, less than 10-6
	LOW	145 Sanitary Waste Line Leak		<1	<1	<1	0	0	2	1	0.5	0		HHRA, less than 10-6
	LOW	142.10 Pond C-1		n	<1	<1	0	0	1	1	0.5	0		HHRA, less than 10-6 Includes pond & sediments
	LOW	142.11 Pond C-2		n	<1	<1	0	0	1	1	0.5	0		HHRA, less than 10-6 Includes pond & sediments
	LOW	167.1 N Landfill Spray Area		<1	<1	<1	0	0	1	1	0.5	0		HHRA, less than 10-6
	LOW	165 Triangle Area		215	<1	14	229	4	2	1	0.5	4	yes	HHRA, less than 10-6, metals
	LOW	141 Sludge Dispersal Area		<1	n	<1	0	0	2	1	0.5	0		HHRA, less than 10-6

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ER Ranking

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	LOW	156.2 Soil Disposal Area		<1	<1	<1	0	0	1	1	0.5	0		HHRA, less than 10-6
	LOW	201 Standley Lake		<1	<1	<1	0	0	1	1	0.5	0		Passed CDPHE screen
	LOW	202 Mower Reservoir		<1	<1	<1	0	0	1	1	0.5	0		Passed CDPHE screen
	LOW	209 Surface Disturbances		<1	<1	<1	0	0	1	1	0.5	0		Passed CDPHE screen
	LOW	166.1 Landfill Trench A		<1	<1	n	0	0	1	1	0.5	0		Passed CDPHE screen
	LOW	166.2 Landfill Trench B		<1	<1	n	0	0	1	1	0.5	0		Passed CDPHE screen
	LOW	166.3 Landfill Trench C		<1	<1	n	0	0	1	1	0.5	0		Passed CDPHE screen
	LOW	F167.3 Former S. Spray Field		<1	<1	<1	0	0	1	1	0.5	0		Passed CDPHE screen
	LOW	142.4 Pond A-4		<1	<1	<1	0	0	1	1	0.5	0		Passed CDPHE screen
	LOW	142.9 Pond B-5		<1	<1	<1	0	0	1	1	0.5	0		Passed CDPHE screen w/ pond and sediment data
	LOW	142.12 Walnut and Indiana Pond		<1	<1	<1	0	0	1	1	0.5	0		Passed CDPHE screen w/ pond and sediment data
	LOW	216.1 East Spray Field - OU 6		n	<1	<1	0	0	1	1	0.5	0		Passed CDPHE screen
C-96	LOW	179 B865 Drum Storage, Rm. 145		n	n	n	0	0	1	1	0.5	0		Passed CDPHE screen
C-96	LOW	180 B883 Drum Storage, Rm. 104		n	n	n	0	0	1	1	0.5	0		RCRA Clean Closure CAD/ROD complete
C-96	LOW	204 Original Uranium Chip Roaster		n	n	n	0	0	1	1	0.5	0		RCRA Clean Closure CAD/ROD complete
C-96	LOW	178 B881 Drum Storage, Rm. 165		n	n	n	0	0	1	1	0.5	0		RCRA Clean Closure CAD/ROD complete
C-96	LOW	211 B881 Drum Storage #26-R211		n	n	n	0	0	1	1	0.5	0		No source found-CAD/ROD complete
C-96	LOW	217 B881 Cyanide Treatment - #32		n	n	n	0	0	1	1	0.5	0		No source found-CAD/ROD Complete
														No source found-CAD/ROD Complete
C-96	Remediation complete in 1996													
IAC-96	Interim Action Complete in 1996													
INV	Needs further investigation													
LOW	Low priority													

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